



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/706,569  | 11/12/2003  | Iqbal Ahmed          | 5003073-034US1      | 6659             |
| 29737   | 7590        | 08/10/2006           | EXAMINER            |                  |
| SMITH MOORE LLP<br>P.O. BOX 21927<br>GREENSBORO, NC 27420 |             |                      | LEE, RIP A          |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1713                |                  |
| DATE MAILED: 08/10/2006                                   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/706,569

Applicant(s)

AHMED ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☒ Claim(s) 1 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This office action follows a request for continued examination (RCE) under 37 § C.F.R. 1.114, filed on June 1, 2006. Claims 1 and 3-19 are pending.

#### *Claim Objections*

1. Claims 1 and 10 are objected to because of the following informalities: The description “aqueous coating” appears to be incorrect. A coating may be applied *via* an aqueous solution, but the coating in the final product is not “aqueous.” Furthermore, there is insufficient antecedent basis for the term “aqueous coating” in line 4 of claim 1. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 102 / 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 4-11, and 13-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ganslaw *et al.* (U.S. 4,043,952).

Ganslaw *et al.* discloses surface treatment of superabsorbent particles with a solution of polyvalent metal ion (example II, table I, entries 1-16). The polymer contains 2 wt % internal crosslinking agent and it has been neutralized (table, column 12: 100 pw of acrylic acid / 2 pw of Al(OAc)<sub>3</sub> / 50 of pw KOH). The reference is silent with regard to the properties recited in the instant claims, however, in view of the fact that the material is essentially the same as that described in the instant claims, and in light of the fact that there is a reduction in the rate of absorption of fluid at the surface of the superabsorbent particle (col. 11, line 10), a reasonable basis exists to believe that the material exhibits the essentially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

It is officially noted that the term "aqueous coated" appears in product-by-process format. The solutions used to prepare the inventive compositions are blends of water miscible solvents with water. Despite this, it would appear that the end product is the same. It is well settled that where product by process claims are rejected over a prior art product that appears to be the same, the burden is shifted to the Applicant to establish an unobviousness difference, even if the production processes are different.<sup>1</sup> That is, the burden rests with Applicants to show that the invention of Ganslaw *et al.* is not a coated superabsorbent particle and that it does not exhibit the claimed properties. Furthermore, the patentability of a product claim rests on the product formed, not on the method by which it was produced.<sup>2</sup>

4. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganslaw *et al.*

The cited examples show use of aluminum acetate as the source of aluminum ion, however, it would have been obvious to use aluminum chloride or aluminum sulfate, and thereby arrive at the subject matter of the instant claims, because the inventors disclose that aluminum chloride or aluminum sulfate may also be used as the polyvalent metal ion source (col. 6, line 19).

5. Claims 1 and 3-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mertens *et al.* (WO 00/53664; equivalent document U.S. 6,620,889 relied upon for translation).

Mertens discloses treatment of superabsorbent polymer particles (polyacrylic acid, 70 mole % neutralized, crosslinked with PEG diacrylate) at the surface with an aqueous solution of aluminum sulfate (example 1). The reference is silent with regard to the properties recited in the instant claims, however, in view of the fact that the material is essentially the same as that described in the instant claims, a reasonable basis exists to believe that the material exhibits the essentially the same properties. Since the PTO can not conduct experiments, the burden of proof

---

<sup>1</sup> *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

<sup>2</sup> *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

6. Claims 1 and 3-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gartner *et al.* (U.S. 6,323,252).

Examples 18-20 of Gartner *et al.* disclose superabsorbent particles (polyacrylic acid, neutralized, crosslinked with ethoxylated trimethylolpropane triacrylate) surface treated with an aqueous solutions of aluminum ion. Aluminum chloride is the source of aluminum ion for experiments conducted by the inventors (see table II). The reference is silent with regard to the properties recited in the instant claims, however, in view of the fact that the material is essentially the same as that described in the instant claims, a reasonable basis exists to believe that the material exhibits the essentially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

7. Claims 1 and 3-9 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cook *et al.*

Cook *et al.* teaches a superabsorbent polymer particle coated with polyvalent metal ion (aluminum sulfate) by use of a non-aqueous solution of polyvalent ion salt. The reference is silent with regard to the properties recited in the instant claims, however, in view of the fact that the material is essentially the same as that described in the instant claims, and in light of the fact that there is a reduction in the rate of absorption of fluid at the surface of the superabsorbent particle (col. 11, line 10), a reasonable basis exists to believe that the material exhibits the essentially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

The examiner notes that the term "aqueous coated" is written in product-by-process format. Despite the difference in the solutions used to coat the particles, it would appear that the

end product is the same. It is well settled that where product by process claims are rejected over a prior art product that appears to be the same, the burden is shifted to the Applicant to establish an unobviousness difference, even if the production processes are different.<sup>1</sup> That is, the burden rests with Applicants to show that the invention of Cook *et al.* is not a coated superabsorbent particle and that it does not exhibit the claimed properties. Furthermore, the patentability of a product claim rests on the product formed, not on the method by which it was produced.<sup>2</sup>

### *Response to Arguments*

8. Applicants traverse the rejection of claims over Cook *et al.* Applicant's arguments have been considered fully, but they are not persuasive. Applicants indicate that the prior art states that the superabsorbent particles quickly absorb fluid. The adverb "quickly" is a relative term, and in absence of concrete data for direct comparison of the absorbency, the burden of establishing unobviousness differences between the coated superabsorbent particles of Cook *et al.* and those of the instant invention has not been met satisfactorily. Applicants also point to the fact that the superabsorbent particles have been coated with a non-aqueous solution of metal ion, which is in contrast to the method described in the product-by-process claim. Again, the burden of proof rests with Applicants to establish unobviousness differences between coated superabsorbent particles of the prior art and those of the instant invention. In light of this and previous discussion, the rejection has not been withdrawn.

9. The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure. Wilson (U.S 2002/0193492) and Sun *et al.* (WO 01/00258) were cited as "X" references in an accompanying foreign search report. These references do not apply the instant claims, as amended. Wilson teaches use of polyvalent metal ion for crosslinking during the synthesis of superabsorbent polymer, rather than its use for coating superabsorbent polymer particles. Sun *et al.* discloses superabsorbent particles having a delayed free water absorbency of less than 7 g/g polymer/15 min, however, the reference does not teach coating of particles with polyvalent metal ion.


Art Unit: 1713

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

ral

August 3, 2006

  
DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700